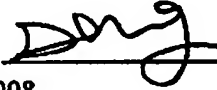


## **CERTIFICATE OF TRANSLATION**

As a below named translator, I hereby declare that my residence and citizenship are as stated below next to my name and I hereby certify that I am conversant with both the English and Korean languages and the document enclosed herewith is a true English translation of Invention Disclosure with respect to the Korean patent application No. 2003-10936 filed on February 21, 2003, which the translation is accurate.

**NAME OF THE TRANSLATOR :** Seung -Ji Kim

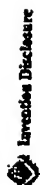
**SIGNATURE :**



**Date :** March 5, 2008

**RESIDENCE :** MIHWA BLDG., 110-2, MYONGRYUN-DONG 4-GA,  
CHONGRO-GU, SEOUL 110-524, KOREA

**CITIZENSHIP :** REPUBLIC OF KOREA



<Rights, which can be registered with respect to the present invention to the jobs of employees, are granted to an employees' corporation under the regulation of articles 39 and 40 of the patent law>>

■ The present employee invention is received by the intellectual property team of the telecommunication institute (Suwon city and Kumi city).

■ Title of Invention : PROCESS FOR SOUND AT CONCURRENT SERVICE

■ Name of Subject <undecided (to be filled later)> ■ Subject code XXXXX ■ Name of Product -

■ Name of Core Technique(code)

■ Evaluation of technical contents

	<input checked="" type="radio"/> individual invention	<input type="radio"/> industry-university cooperation	<input type="radio"/> outside development	<input type="radio"/> cooperative development
	[Contract Attachment]			

[ Inscription of a property right and description about compensation problem ]				
	Due date of disclosure	Disclosed country and organization	Disclosure type	

Identification of inventor

	Development 1 group(wireless)	100	KWANG-HEE PARK	朴光熙
박광희	740305-1030126	102 Green villa, 355-9 Mangpo-dong, Youngtong-gu, Suwon, Kyunggi-do		

File of employee invention report

Process for Sound at Concurrent Service.gul	Process for Sound at Concurrent Service
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Judgment of invention grade						
KWANG-HEE PARK	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	-	[REDACTED]
HEE-DEOK KIM	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	-	[REDACTED]
	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	-	[REDACTED]

### ■ Dates regarding employee invention




















**Receipt Number of Employee Invention : GK-200211-002-1**

Employee Invention Report (Invention Disclosure)				[Points to be pre-checked]			
<p>● Title of Invention</p> <p>♦ Simple &amp; clear title capable of expressing the content of the invention</p>				<p>○ prompt application is necessary under the first-to-file system</p> <p>○ complete invention is necessary</p> <p>- the invention must be backed up by embodiments, data, etc.</p> <p>- incomplete or only desired idea is not available</p> <p>○ publication before application is prohibited</p> <p>- academy presentation, paper publication, sale, display, etc. are prohibited</p>			
Korean	Process for sounds at concurrent services						
English	Process for sounds at concurrent services						
Related prior art & prior application				<p>- all technologies in relation to the present invention, which have already been filed or are currently pending</p> <p>- improvement application can be filed within one year from the first application data, with domestic priority claiming</p>			
[Technology Source] (optionally fill only corresponding blanks) *	Similar patent or application	Application/registration No.		Application/registration Date			
		Title of Invention					
		Applicant					
	Background document or product	Document name/product model name		Publisher/manufacturer			
		Publication/production date		Page/others			
	Prior application(s) of the inventor(s) related to the invention	Filed application(s)	Title of invention				
			Application no./date		(19 ...)		
		Pending application(s)	Title of invention				
Receipt no./date			(19 ...)				

## 1. BACKGROUND OF INVENTION

### A. FIELD OF INVENTION

5 Functions of a mobile terminal (software)

### B. DESCRIPTION OF PRIOR ART

A mobile terminal on the market today provides no more than one service of providing a voice service, a video communication service, and a motion picture service at one time.

5    **※ What is concurrent services?**

Concurrent services are that a variety of services at one time are provided to a mobile terminal. For example, a case when a mobile terminal user uses a VOD Service while using a voice communication service is called concurrent services.

Another example of concurrent services: a video communication service + a  
10 VOD Service, a voice communication service + a web surfing service

**C. PROBLEMS OF THE PRIOR ART & OBJECTS OF THE INVENTION**

**- PROBLEMS OF THE PRIOR ART**

15 A mobile terminal on the market today provides no more than one service of providing a voice service, a video communication service, and a motion picture service at one time. How can a mobile terminal having only one speaker process sounds if a mobile terminal user uses a voice service while using a motion picture service? A mobile terminal on the market today cannot support concurrent  
20 services. However, even if a mobile terminal can support such concurrent services, the problem with the sound process remains unsolved.

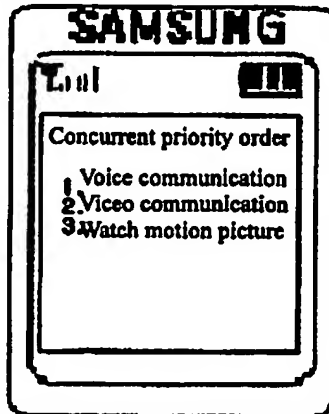
**- OBJECTS OF THE INVENTION**

The present invention provides a method for preventing sounds output from a  
25 speaker from being mixed, and providing a sound that a user wants to hear, by prioritizing two or more voices or sounds simultaneously input to a mobile terminal at concurrent services. In addition, the present invention provides one switch key allowing a user voluntarily change services.

## 2. DETAILED DESCRIPTION OF THE INVENTION

### A. CONSTRUCTION OF THE INVENTION

#### 1. Setup of the priority order for Concurrent services



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Setup of the priority order for Concurrent services

#### 2. Setup of a Switch Key

While concurrent services are provided to a mobile terminal user, a sound output  
10 from a speaker is related to one of the concurrent services. Herein, a user can set  
a switch key in such a manner that a sound currently output from a speaker, from  
among sounds related to concurrent services provided to the user, is stopped, and  
another service sound is output from the speaker.

### 15 B. OPERATION OF THE INVENTION

As shown in the above figure, a mobile terminal user can set the priority order  
for all services provided to a mobile terminal.

When a user uses concurrent services, the sound output from a speaker of a  
mobile terminal is related to a service assigned a high priority from among the  
20 concurrent services.

When a sound related to a service assigned a high priority is output from a  
speaker of a mobile terminal, a user can stop the sound of the high-priority

service, and instead can cause a sound of a low-priority service to output from the speaker of the mobile terminal, by pressing a switch key. Herein, when the switch key is pressed again, the sound of the high-priority service is output from the speaker of the mobile terminal.

5

**Ex) Priority Order of Concurrent Services**

1. a video communication service
2. a voice communication service
3. a motion picture service

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When a mobile terminal user receives a call from another party while watching a motion picture on a mobile terminal, the sound output from a terminal speaker changes from a motion picture sound to a voice of another party.

- 15 When the mobile terminal user presses a switch key while communicating with another party, the terminal speaker outputs the sound of the motion picture.

Then, when the mobile terminal user presses the switch key again, the terminal speaker outputs the voice of another party.

20

**C. EFFECTS OF THE INVENTION**

According to the method as described above, a mobile terminal user can hear a service sound that the user wants to hear, without a mix of sounds, even when using multiple services at the same time.

- 25 In addition, a process for other sounds of concurrent services, which has not been determined, is established, thereby more quickly expediting the development.

**3. CLAIMS**

<p><input type="checkbox"/> Very important Item which determines the invention and its scope (*omissible when the description part is unnecessary)</p>
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- mention only characteristic matters which are desired to be protected by an exclusive right
- mention novel elements necessary to have the same effect as the characteristics of the invention

[Examples]

1. Superordinate Concept (Independent Claim)

- ○○ device (circuit ) comprising A for performing an XXX function and B for performing a YYY function.
- ○○ method comprising an A step and a B step.

2. Subordinate Concept (Dependent Claim)

- The device (circuit) of claim 1 (citing the independent claim), wherein the detection unit (means) comprises ... for ..., and .... for .....
- The method of claim 1 (citing the independent claim), wherein the connection in step A is .....

3. Superordinate Concept (Independent Claim)

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- A process for sounds when concurrent services are provided

1) Superordinate concept (Independent Claim)

- 5 - A user can set the priority order for services.
- When concurrent services are provided, a sound is processed according to the priority order.
  - The user can voluntarily change the sound by setting a Switch key.

10 4. Drawings

1. A view which can best express the characteristics of the invention shall be selected as a representative drawing, and the same reference numerals as those in the detailed description of the invention shall be marked in the drawings
2. Brief description of the drawings shall be attached under the drawings (\* omissible when the description is unnecessary)

A. DRAWINGS OF THE PRIOR ART

B. DRAWINGS OF THE INVENTION

\* In the figure below, A and B services indicate the services which a user can use, such as a voice communication service, a video communication service, a web-surfing service, and a motion picture service.

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